Maryland Historical Trust

Maryland Inventory of Historic Properties number: PG:70-56

Name: MD 450 over Abandoned Railroad

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

MARYLAND HISTORICAL TRUST	
Eligibility Recommended _____	Eligibility Not Recommended __X____
Criteria: ____A ____B ____C ____D Considerations: ___A ___B ___C ___D ___E ___F ___G __None	
Comments:_____	
Reviewer, OPS:_Anne E. Bruder_____	Date:__3 April 2001____
Reviewer, NR Program:__Peter E. Kurtze_____	Date:__3 April 2001____

MARYLAND INVENTORY OF HISTORIC BRIDGES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

MHT No. PG:70-56

SHA Bridge No. 16015 **Bridge name** MD 450 over Abandoned Railroad

LOCATION:
Street/Road name and number [facility carried] MD 450 (Annapolis Road)

City/town Buena Vista **Vicinity** X

County Prince George's

This bridge projects over: Road____ **Railway** X **Water**_____ **Land**____

Ownership: State X **County**_____ **Municipal**_____ **Other**_____

HISTORIC STATUS:
Is the bridge located within a designated historic district? Yes_____ **No** X
National Register-listed district____ **National Register-determined-eligible district**__
Locally-designated district_____ **Other**_____

Name of district_____

BRIDGE TYPE:
Timber Bridge_____:
Beam Bridge_____ **Truss -Covered**___ **Trestle**____ **Timber-And-Concrete**___

Stone Arch Bridge_____

Metal Truss Bridge_____

Movable Bridge____:
Swing_____ **Bascule Single Leaf**__ **Bascule Multiple Leaf**_____
Vertical Lift_____ **Retractile**_____ **Pontoon**_____

Metal Girder X:
Rolled Girder_____ **Rolled Girder Concrete Encased** X
Plate Girder_____ **Plate Girder Concrete Encased**_____

Metal Suspension_____

Metal Arch_____

Metal Cantilever_____

Concrete_____:
Concrete Arch_____ **Concrete Slab**_____ **Concrete Beam**____ **Rigid Frame**_____
Other_____ **Type Name**_____

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DESCRIPTION:
Setting: Urban _____ **Small town** ____X____ **Rural** _____

This bridge was previously surveyed by the State Highway Administration in September 1995. The following is a revised version of the bridge inventory form prepared at that time.

Describe Setting:
Bridge No. 16015 carries MD 450 (Annapolis Road) over an abandoned railroad line in Prince George's County. MD 450 runs east-west and the abandoned railroad line extends north-south. The bridge is located in an area known as Buena Vista and is surrounded by woodland and single family dwellings to the southeast and northwest. Overhead utility lines traverse the railroad cut, parallel to both sides of the bridge. Other utility lines cross perpendicular under the bridge.

Describe Superstructure and Substructure:

Bridge No. 16015 is a 3-span, 2-lane, metal girder bridge constructed in 1931. The structure has span lengths of 35 feet, 37 feet and 35 feet with a total structure length of 107 feet. The bridge has a clear roadway width of 24 feet without sidewalks. The superstructure consists of nine (9) concrete encased, rolled girders which support a reinforced concrete deck and concrete parapets. The roadway is carried on the girders. The structure has pierced parapets and the roadway approaches have w-section guardrails which border the roadway and attach to the end blocks of the parapets. The substructure consists of two (2) concrete abutments and two (2) concrete pier columns. There are four (4) flared concrete wing walls. The bridge is posted for 29 tons, and has a sufficiency rating of 24.0.

According to the 1996 inspection report, this structure was in fair to poor condition with cracking, rusting and efflorescence. Seventy-five (75) percent of the deck is hollow sounding along with longitudinal and transverse cracking. The parapets have areas of spalling with exposed reinforcement bars. Both parapets have large areas of patches and cracking. Span 2 of the south parapet is slightly misaligned. The girders have light to heavy rust and scaling throughout. Both the abutments and the pier columns have vertical cracking with efflorescence. All of the wing walls have been patched and have random cracking.

Discuss Major Alterations:

According to the prior inventory form, the bridge was repaired in 1991/92. The repairs included patching the pier caps with gunite and replacing the wearing surface.

HISTORY:

WHEN was the bridge built: 1931
This date is: Actual ____X____ **Estimated** _____
Source of date: Plaque ____ **Design plans** ___ **County bridge files/inspection form** ____
Other (specify): State Highway Administration bridge files/inspection forms

WHY was the bridge built?

The bridge was constructed in response to the need for more efficient transportation network and increased load capacity.

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WHO was the designer?

Unknown

WHO was the builder?

Unknown

WHY was the bridge altered?

N/A

Was this bridge built as part of an organized bridge-building campaign?

Unknown

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:
A - Events _____ B- Person _____
C- Engineering/architectural character _____

The bridge is not eligible for the National Register of Historic Places due to the severe deterioration of character defining elements.

Was the bridge constructed in response to significant events in Maryland or local history?

Metal girder bridges were most likely introduced and first popularized in Maryland by the state's major railroads of the nineteenth century including the Baltimore and Susquehanna, its successor the Northern Central, and the Baltimore and Ohio Railroad. Bridge engineering historians have documented the fact that James Milholland (or Mulholland) erected the earliest plate girder span in the United States on the Baltimore and Susquehanna Railroad in 1846 at Bolton Station, near present-day Mount Royal Station. The sides (web) and bottom flange of Milholland's 54-foot-long span were wholly of wrought iron and included a top flange reinforced with a 12x12-inch timber. Plates employed in the bridge were 6 feet deep and 38 inches wide, giving the entire bridge a total weight of some 14 tons. Milholland's pioneering plate girder cost $2,200 (Tyrrell 1911:195). By December 31, 1861, the Northern Central Railroad, which succeeded the Baltimore and Susquehanna, maintained an operating inventory in Maryland of 50 or more bridges described simply as "girder" spans, in addition to a number of Howe trusses. Most of these were probably iron girder bridges; the longest were the 117-foot double-span bridge over Jones Falls and the 106-foot double-span girder bridge at Pierce's Mill (Gunnarson 1990:179-180).

As in the nation, girder bridge technology in Maryland was quickly adapted to cope with the increasingly heavy traffic demands of the twentieth century caused by automobile and truck traffic. The 1899 Maryland Geological Survey report on highways noted that "there are comparatively few I-beam bridges, one of the cheapest and best forms for spans less than 25 or 30 feet" (Johnson 1899:206). Interestingly, the report also urged construction of a composite metal, brick, and concrete bridge, noting that "no method of construction is more durable than the combination of masonry and I-beams, between which are transverse arches of brick, the whole covered with concrete, over which is laid the roadway" (Johnson 1899:206). Whether any such bridges (transitional structures between I-beams and reinforced concrete spans) were built is unknown.

Official state and county highway reports—issued between 1900 and the early 1920s through the Highway Division of the Maryland Geological Survey and its successor, the State Roads Commission—generally do not reference or describe girder construction. An analysis of the current statewide listing of county and municipal bridges (a listing maintained by the State Highway Administration) reveals that 48 county bridges, out of the total of 141 approximately dated to "1900" by county engineers, were listed as steel girder, steel stringer, or variants of such terms. (It should be noted that the "1900" date is often given when no exact date is pinpointed for a bridge that is clearly old). A grand total of 200 bridges (including "steel culverts"), out of 550 bridges dated on the county list between 1901 and 1930, were described as steel beam, steel girder, or steel stringer and girder varieties. The total suggests that among the various highway bridge types built in the early twentieth century metal girder bridges in Maryland between 1900 and 1930 were second in popularity only to reinforced concrete bridges. However, these numbers must be interpreted with caution, as they do not necessarily include all county and municipal bridges.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?

There is no evidence that the construction of this bridge had a significant impact on the growth and development of this area.

Is the bridge located in an area which may be eligible for historic designation and would the bridge add to or detract from the historic/visual character of the potential district?

The bridge is located in an area which does not appear to be eligible for historic designation.

Is the bridge a significant example of its type?

A significant example of a metal girder bridge should possess character-defining elements of its type, and be readily recognized as an historic structure from the perspective of the traveler. The integrity of distinctive features visible from the roadway approach, including parapet walls or railings, is important in structures which are common examples of their type. In addition, the structure must be in excellent condition. This bridge, which suffers from severe deterioration of the character defining elements, is an undistinguished example of a metal girder bridge.

Does the bridge retain integrity of important elements described in Context Addendum?

The bridge retains the character-defining elements of its type, as defined by the Statewide Historic Bridge Context, including concrete encased rolled girders, concrete abutments and concrete piers, but severe deterioration is evident.

Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?

This bridge is not a significant example of the work of a manufacturer, designer, and/or engineer.

Should the bridge be given further study before an evaluation of its significance is made?

No further study of this bridge is required to evaluate its significance.

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BIBLIOGRAPHY:

County inspection/bridge files _____ **SHA inspection/bridge files** X
Other (list):

Gunnarson, Robert
1990 *The Story of the Northern Central Railway, From Baltimore to Lake Ontario.* Greenberg Publishing Co., Sykesville, Maryland.

Johnson, Arthur Newhall
1899 The Present Condition of Maryland Highways. In *Report on the Highways of Maryland.* Maryland Geological Survey, The Johns Hopkins University Press, Baltimore.

State Highway Administration
1995 Maryland Inventory of Historic Properties, Historic Bridge Inventory: Bridge 16015. State Highway Administration, Brooklandville, Maryland.

Tyrrell, Henry G.
1911 *History of Bridge Engineering.* Published by author, Chicago.

SURVEYOR:

Date bridge recorded 2/25/97
Name of surveyor Caroline Hall/Tim Tamburrino
Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204
Phone number (410) 296-1685 **FAX number** (410) 296-1670

Maryland Historic Highway Bridges

Bridge Type METAL GIRDER

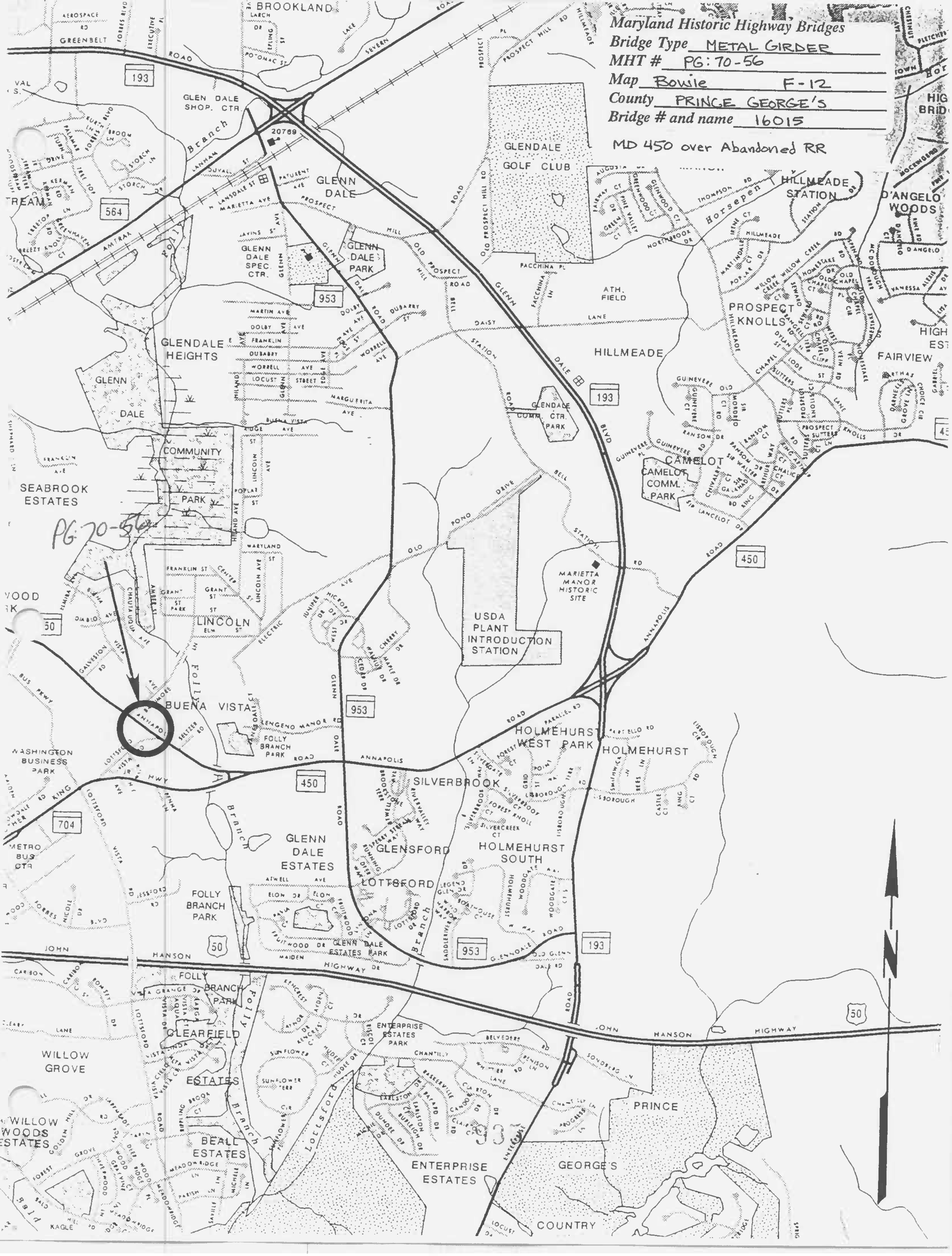
MHT # PG: 70-56

Map Bowie F-12

County PRINCE GEORGE'S

Bridge # and name 16015

MD 450 over Abandoned RR



Inventory # PG:70-56

Name 16095-MD 450 OVER ABANDONED RR
County/State PRINCE GEORGES COUNTY/MD
Name of Photographer WALLY KING
Date 1/95

Location of Negative SHA

Description EAST APPROACH LOOKING WEST

Number 1 of 4

Inventory # PG:70-56

Name 4001S-MD 450 OVER ABANDONED RR

County/State PRINCE GEORGES COUNTY/MD

Name of Photographer WALLY KING

Date 1/95

Location of Negative SHA

Description WEST APPROACH LOOKING EAST

Number 2 of 43

Inventory # PG:70-56

Name 16015-MD 450 OVER ABANDONED RR

County/State PRINCE GEORGES COUNTY/MD

Name of Photographer WALLY KING

Date 1/95

Location of Negative SHA

Description SOUTH ELEVATION

Number 3 of 4

Inventory # PG:70-56

Name 16015-MD 450 OVER ABANDONED RR

County/State PRINCE GEORGES COUNTY/MD

Name of Photographer WALLY KING

Date 1/95

Location of Negative SHA

Description NORTH ELEVATION

Number 4 of 4

7603657

INDIVIDUAL PROPERTY/DISTRICT
MARYLAND HISTORICAL TRUST
INTERNAL NR-ELIGIBILITY REVIEW FORM

PG:70-56

Property/District Name: Bridge 16015 Survey Number: ~~PG:70-2~~

Project: MD 450:MD 193 to Seabrook Road Agency: FHWA/SHA

Site visit by MHT Staff: X no ___ yes Name _____ Date _____

Eligibility recommended _____ Eligibility **not** recommended X

Criteria: ___A ___B ___C ___D Considerations: ___A ___B ___C ___D ___E ___F ___G ___None

Justification for decision: (Use continuation sheet if necessary and attach map)

Based on the available information, Bridge No. 16015, MD 450 over abandoned Railroad, does not appear to meet the National Register Criteria for individual listing. The three span, concrete encased metal girder bridge was constructed in 1931. It has pierced balustrades and retains all of its character defining elements (CDEs). However, based on a July 18, 1996 inspection by SHA bridge engineers, the bridge is in poor condition. There is substantial substructure deterioration and the superstructure is severely deteriorated as well, with 75% of the deck being hollow sounding, exposed reinforcing, deteriorated concrete, severe rusting, and section loss. According to the revised inventory form prepared by SHA (9/30/96), the bridge does not retain integrity, because its CDEs are beyond the point of rehabilitation. To conclude, the bridge lacks sufficient integrity to be eligible under any of the Criteria. Lastly, the bridge is not located in an area which would constitute a district eligible for the National Register of Historic Places. It is slated for replacement as part of the MD 450 project.

The Interagency Bridge Committee determined the bridge to be eligible. However, since that time, the bridge has continued to deteriorate and a recent inspection report (7/18/96) rated the bridge as in overall poor condition. Based on this new information and the revised inventory form, it now appears that the bridge is not eligible.

Documentation on the property/district is presented in: Project file, Maryland Inventory Form PG:70-2

Prepared by: Jason Moser, SHA (1995), revised by James T. Aquirre, SHA (1996)

Elizabeth Hannold — Reviewer, Office of Preservation Services
October 15, 1996 — Date

NR program concurrence: X yes ___ no ___ not applicable

Peter E. Kurtze — Reviewer, NR program
10/16/96 — Date

Survey No. PG: ~~70-2~~ 70-56

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA - HISTORIC CONTEXT

I. Geographic Region:

____	Eastern Shore	(all Eastern Shore counties, and Cecil)
__X__	Western Shore	(Anne Arundel, Calvert, Charles, Prince George's and St. Mary's)
____	Piedmont	(Baltimore City, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery)
____	Western Maryland	(Allegany, Garrett and Washington)

II. Chronological/Developmental Periods:

____	Paleo-Indian	10000-7500 B.C.
____	Early Archaic	7500-6000 B.C.
____	Middle Archaic	6000-4000 B.C.
____	Late Archaic	4000-2000 B.C.
____	Early Woodland	2000-500 B.C.
____	Middle Woodland	500 B.C. - A.D. 900
____	Late Woodland/Archaic	A.D. 900-1600
____	Contact and Settlement	A.D. 1570-1750
____	Rural Agrarian Intensification	A.D. 1680-1815
____	Agricultural-Industrial Transition	A.D. 1815-1870
____	Industrial/Urban Dominance	A.D. 1870-1930
__X__	Modern Period	A.D. 1930-Present
____	Unknown Period (___ prehistoric	___ historic)

III. Prehistoric Period Themes:

____	Subsistence
____	Settlement
____	Political
____	Demographic
____	Religion
____	Technology
____	Environmental Adaption

IV. Historic Period Themes:

____	Agriculture
__X__	Architecture, Landscape Architecture, and Community Planning
____	Economic (Commercial and Industrial)
____	Government/Law
____	Military
____	Religion
____	Social/Educational/Cultural
__X__	Transportation

V. Resource Type:

Category: Structure

Historic Environment: Rural/Suburban

Historic Function(s) and Use(s): Transportation-vehicular

Known Design Source: State Roads Commission

PG:70-56
Bridge #16015, MD 450 over Abandoned Railroad
Annapolis Road (MD 450)
Lanham quadrangle